

EXPRESS MAIL NO.: EL750740729US

Docket No. 00-063-DSK

CLAIMS:

What is claimed is:

- 1 1. A method for recovery of compromised instances of
2 virtual mapping systems, comprising the steps of:
 - 3 identifying a plurality of physical data elements
4 for which mapping has been compromised;
 - 5 determining whether anchor points exist for the
6 plurality of physical data elements;
 - 7 processing anchor points to find data elements in
8 managed order if anchor points exist; and
 - 9 launching processing for each element found.
- 1 2. The method of claim 1, wherein the managed order
2 comprises data elements with sequential addresses.
- 1 3. The method of claim 1, wherein the managed order
2 comprises data elements that are sorted by address.
- 1 4. The method of claim 1, wherein the managed order
2 comprises data elements that are sorted by query
3 frequency.
- 1 5. The method of claim 1, further comprising:
 - 2 finding data elements in physical space if anchor
3 points do not exist.

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1 6. The method of claim 5, wherein the step of finding
2 data elements in physical space comprises at least one of
3 a sequential scan, random entry, and a binary search.

1 7. An apparatus for recovery of compromised instances
2 of virtual mapping systems, comprising:

3 identification means for identifying a plurality of
4 physical data elements for which mapping has been
5 compromised;

determination means for determining whether anchor points exist for the plurality of physical data elements;

8 first processing means for processing anchor points
9 to find data elements in managed order if anchor points
10 exist; and

11 second processing means for processing each element
12 found.

1 8. The apparatus of claim 7, wherein the managed order
2 comprises data elements with sequential addresses.

1 9. The apparatus of claim 7, wherein the managed order
2 comprises data elements that are sorted by address.

1 10. The apparatus of claim 7, wherein the managed order
2 comprises data elements that are sorted by query
3 frequency.

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- 1 11. The apparatus of claim 7, further comprising:
 - 2 means for finding data elements in physical space if
 - 3 anchor points do not exist.

- 1 12. The apparatus of claim 11, wherein the means for
- 2 finding data elements in physical space comprises at
- 3 least one of a sequential scan, random entry, and a
- 4 binary search.

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